Mississippi Department of Environmental Quality

Questions and Answers on Oil Clean-Up Waste Disposal

MDEQ has been involved in addressing issues with the BP Oil Spill since the discovery of the incident. Our agency is a part of a Unified Incident Command Center in Mobile, Alabama that coordinates and works together on a host of issues related to the BP Oil Spill incident. The command center includes the U.S. Coast Guard, the U.S. EPA, the MDEQ, the environmental agencies in other states, the Mississippi Dept of Marine Resources, the Mississippi Emergency Management Agency and a number of other state and federal agencies involved in assessing the impacts of the spill and ensuring proper response to the oil spill incident. MDEQ has encountered a number of questions from the public, the media and local officials on the disposal of clean-up wastes from the BP Horizon Oil Spill in local municipal solid waste landfills. We understand the concerns of our state's citizens and leaders on these waste disposal issues and have developed the following question and answer fact sheet in order to respond to many of the questions that our agency is receiving on this matter.

What types of wastes from the clean-up of the oil spill are actually being disposed in local municipal solid waste landfills?

Crude oil solids and other materials that have been contacted with crude oil are being removed and cleaned up along the Gulf Coast of Mississippi as well as in the States of Florida, Alabama, Louisiana and Texas. These materials include: sand and sediment, marine trash and debris, vegetation, absorbent material and booms, variously sized oil patties and tarballs, personal protection equipment and other materials. In order for the debris to be considered for landfill disposal, the materials must be nonhazardous solid wastes that originate in the state of Mississippi. It is important to understand that it is the goal of MDEQ and other state and federal agencies that we focus on removing oil from the gulf waters to prevent the oil from coming ashore and impacting our shoreline. Crude oil and liquid oily wastewater that is collected from the gulf will not be placed in municipal solid waste landfills. These materials will either have to be further processed to recover the crude oil material for refining into a product, recycled in some other acceptable manner or will have to be treated and disposed of in a different manner as described by the federally approved Liquid Waste Management Plans and Directives.

Why are materials that have been contacted by the oil considered nonhazardous, if the oil is harmful to the environment?

Materials are defined as hazardous wastes or nonhazardous wastes depending on the characteristics of the material. A waste is deemed to be hazardous under Federal and State regulations if it exceeds certain established threshold conditions for one or more of four different characteristics which include: toxicity, ignitability, reactivity and corrosivity. Wastes that do not exceed the established federal threshold conditions for these four characteristics are not considered hazardous wastes and may often be called "nonhazardous wastes." The

characterization of a material as a "nonhazardous waste" does not mean that the waste cannot cause hazards or problems for the environment or for public health if released in an uncontrolled manner and in large quantities. However, the characterization of a waste as hazardous or nonhazardous does dictate the regulatory requirements that must be followed in managing and disposing of the waste. For the oil impacted solid wastes that do not exhibit hazardous characteristics, MDEQ believes that these wastes can be properly managed and safely disposed of under the state requirements of the Mississippi Nonhazardous Solid Waste Management Regulations.

How do we know that the crude oil and other oil containing wastes are not hazardous?

The U.S. EPA has reviewed and considered the potential harmful effects of crude oil impacted wastes for a number of years in its study of oil and gas exploration and production wastes. Through these studies, the EPA created an exemption for certain wastes generated by the oil and gas exploration and production industry from the federal hazardous waste regulations because the materials have not been shown to contain hazardous characteristics. These Federal Hazardous Waste regulations have been adopted by the State of Mississippi and MDEQ is delegated by the U.S. EPA to manage the hazardous and nonhazardous solid waste programs in Mississippi. As we evaluate the crude oil materials that are impacting our coastline from the recent spill, it is important to understand that we have a foundation of knowledge that the U.S. Environmental Protection Agency has developed on these types of materials over numbers of years.

However, even though we do have historical information on crude oil impacted wastes, the U.S. EPA and MDEQ and other state and federal agencies have required that BP, through independent laboratories, conduct confirmatory ongoing analysis of the crude oil materials in the water, of the tar balls that are being encountered at points along the coastline, and of the soils and other debris that has been contacted by the crude oil material all along the Gulf Coast. In addition testing of these wastes materials will also continue to be conducted by the U.S. EPA, MDEQ and various other organizations. The tests that have been conducted on the crude oil constituents have consistently shown that the materials do not possess characteristics that would require management as a hazardous waste. However, these materials must still be removed from the environment and managed and disposed in an appropriate manner as required of all solid wastes.

Why can MDEQ not stop the oil containing wastes from going to local landfills?

As previously indicated, the testing and analysis performed on the oil wastes has indicated that the materials are nonhazardous solid wastes. Because of this characterization, the wastes can be managed under state and federal law in appropriately permitted nonhazardous solid waste management facilities. Currently, in Mississippi the only types of commercial waste management facilities that are permitted to receive these solid wastes are municipal solid waste landfills that meet federal and state design and operating requirements. The companies that own and operate these landfills have gone through stringent permitting procedures to demonstrate that their facilities can and will meet minimum requirements. Upon completion of the permit application process, the landfill's proposed permits are presented to the Mississippi Environmental Quality Permit Board for consideration for approval. If the permits are issued, then the landfill owner is authorized to develop and operate the landfill and is authorized to accept and dispose of solid wastes that are characteristically nonhazardous.

It is those environmental permits that authorize this disposal activity and MDEQ cannot overturn or revoke such permits without due process and without a legal and regulatory basis for such decisions by the Permit Board. In addition, it is important to remember that various types of nonhazardous solid wastes are generated and disposed at the landfill each day by residents, businesses and industries along our gulf coast. While MDEQ encourages recycling and reuse over landfill disposal, it is important that landfills be available for the disposal of wastes that cannot otherwise be recycled, reused or reclaimed in a legitimate manner.

What is MDEQ doing to ensure that the wastes removed from our coast line and transported to local landfills are being managed appropriately?

MDEQ has a South Regional Office (SRO) in Biloxi, MS that is staffed with environmental scientists and other technical staff that conducts our work on the Mississippi coast. In addition to the existing SRO staff, we have established a special work force at the SRO office to address various environmental issues related to the spill. MDEQ staff from the main office in Jackson are rotating down to the coast in teams to insure that we have proper staff to oversee spill assessment, clean up and disposal. The staff is conducting inspections each day of the shoreline clean-up efforts, the waste staging areas and of the landfills receiving the clean up wastes. We believe that we are able to detect and address potential waste management problems in a prompt and efficient manner with the staffing resources that are being dedicated to this effort.

How much oil containing wastes will be disposed in local landfills and for how long will the disposal continue?

MDEQ cannot at this time, predict the amount of solid wastes that will need to be removed and ultimately managed and disposed. That quantity is somewhat dependent on containing the source of the oil spill. Our goal is to ensure that BP collect and remove the crude oil from Gulf waters prior to the material coming to our shores. We believe this effort will help to minimize the creation of oil containing solid wastes that have to be collected and disposed. We also believe that the majority of oil that is cleaned up from the spill will be removed from the water and therefore will not be disposed in landfills.

In addition, MDEQ is not certain that all oil-containing solid wastes in our state will be disposed of in landfills. BP has been advised to continue its work to evaluate and develop alternative means of remediating and/or re-using or recycling solid wastes generated in the clean up. If viable alternatives are developed as the clean up continues, then it is expected that some solid wastes would be able to be diverted to these other alternate uses.

Can the waste not be burned for energy or used in asphalt manufacturing or recycled in some other way?

The MDEQ and the Incident Command Center have made it a priority to recover oil from the gulf waters and to process that oil for ultimate production. So there is a substantial amount of work going on to recover crude oil from the gulf and to place that crude oil material back into production where possible. There have also been a number of other ideas discussed for how oil patties and tarballs may be recovered and re-used. The suitability of material is in the process of being further evaluated for use in asphalt production. In addition, there is ongoing exploration

and evaluation of ways to use some of the collected waste materials as a fuel for appropriate industries.

Prior to a use being implemented, each of these types of uses would also require an evaluation of the environmental impacts including air emissions, water discharges and residual waste disposal. Therefore, it may take time before legitimate opportunities are developed to reuse or recycle the solid wastes. However, MDEQ and the Incident Command Center will continue to encourage BP and Waste Management to work to continue to find better alternatives for reuse or recovery of solid wastes in lieu of or in addition to landfill disposal.

Why can't BP build its own landfill for these wastes or develop some other type of way of dealing with the wastes? Why does the company have to use the local landfills?

The permitting, development and construction of a landfill that would be able to manage and dispose of these oil containing wastes could take many months if not years to locate, permit and develop and is not a viable option for disposal of the wastes we are collecting now. It is important that we remove these materials from the environment as quickly as possible and dispose of the wastes in a secure and safe manner to prevent continued impacts to the environment along our coastline. That said, the Unified Incident Command Center will continue to encourage BP to consider alternatives to disposal of the materials in solid waste landfills.

Should we be concerned that oil impacted waste materials placed in local landfills will seep into our groundwater?

MDEQ believes that disposal of nonhazardous solid wastes into a permitted municipal solid waste landfill is a safe means of disposing of these wastes and that disposal of wastes from the clean-up of the crude oil should not pose an increased risk to groundwater near the landfill. It is important to remember that the standards by which these landfills are developed and operated were developed by the U.S. EPA because that agency recognized the significant amounts of household hazardous wastes (HHW) that were being disposed at these landfills. These wastes include household chemicals, paints, fluorescent light bulbs, pesticides and other similar household wastes. Because these wastes are generated by households they are exempt from the federal and state hazardous waste regulations and typically disposed in landfills or through local HHW collection events. Due to the disposal of this HHW in municipal landfills, EPA developed Federal regulations that govern municipal landfills with stringent design, construction and operating standards to protect groundwater near the landfill. Mississippi has adopted those minimum federal standards and has added some additional siting and operating requirements as required by our state laws.

Our state regulations require that a landfill must be located in an area that is geologically suitable. So a prospective landfill owner must first demonstrate that the site proposed for a landfill has suitable thick clays underlying where the landfill will be constructed to serve as an additional natural buffer to protect groundwater resources. The regulations also require that landfills meet design requirements that include the construction of a composite liner system of re-compacted clay overlain by a synthetic liner. That liner is sloped to a central point in the disposal cell and a drainage system is constructed over that liner to facilitate the flow of liquids and rainfall in the landfill (known as leachate) to a central point where a sump is located to pump the liquids out of the landfill. The landfill liquids are collected and transported for treatment and

disposal at permitted wastewater facilities. MDEQ believes that these minimum design requirements provide protection to groundwater in the area of the landfill. In order to assure that the liner system and leachate system perform as intended, the landfill owner also is required to install a comprehensive groundwater monitoring well system around the perimeter of the landfill. This system of wells is sampled at least twice a year to ensure that there are no impacts to groundwater quality from the landfill. In regards to the Pecan Grove Landfill in Harrison County, Mississippi, that landfill has been in operation since 1987 and has been actively monitoring groundwater conditions since that time. MDEQ has not detected impacts to groundwater from the landfill and we do not believe that placement of the oil containing clean up wastes will affect the performance of the landfill's liner system and leachate collection system.

Will the placement of the oil impacted waste in local landfills use up the landfill capacity that our community will need for the future?

Each year, landfill operators in the state of Mississippi are required to survey the landfill areas and to calculate the remaining capacity and the remaining expected life available for disposal of solid wastes. The most recent survey and calculations for the Pecan Grove Landfill indicate that the landfill has over 10 million cubic yards of disposal capacity remaining. This remaining capacity appears to provide around 19 years of disposal capacity for the surrounding communities. In addition, the landfill has accepted over 400,000 tons of solid wastes each of the past couple of years primarily from south Mississippi communities. This averages out to almost 8,000 tons per week of solid wastes disposed at the Pecan Grove Landfill. Through July 20, 2010, Waste Management had disposed of approximately 1300 tons of oil impacted wastes at Pecan Grove Landfill over several weeks of clean up activity. This figure represents a small percentage of the overall volume of wastes that is accepted at the landfill for disposal. MDEQ does not believe that the volume of the clean up wastes being brought to the site should significantly affect the overall disposal capacity of the landfill.

Additional Questions

MDEQ hopes that we have been able to answer many of the questions that have been posed to the agency over the past few weeks on the disposal of oil spill clean up wastes. However, if any person has additional questions related to this matter, please do not hesitate to contact our office at 601-961-5171. Also, additional information on the oil spill can be obtained at the MDEQ website at www.deq.state.ms.us. MDEQ is committed to continue our work to ensure that the oil materials along our gulf coast are cleaned up expeditiously and are disposed in a manner that is protective of human health and the environment.